1: Nucleic Acids Res. 1992 Jul 11;20(13):3435-41.

Expression of wild-type and mutant p53 proteins by recombinant vaccinia viruses.

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To facilitate the purification of wild type p53 protein, we established a recombinant p53 vaccinia viral expression system. Using this efficient eukaryotic expression vector, we found that the expressed p53 proteins retained their specific structural characteristics. A comparison between wild type and mutant p53 proteins showed the conservation of the typical subcellular localization and the expression of specific antigenic determinants. Furthermore, wild type p53 exhibited a typical binding with large T antigen, whereas no binding was detected with mutant p53. Both wild type and mutant p53 proteins were highly stable and constituted 5-7% of total protein expressed in the infected cells. These expression recombinant viruses offer a simple, valuable system for the purification of wild type and mutant p53 proteins that are expressed abundantly in eukaryotic cells.

PMID: 1630914 [PubMed - indexed for MEDLINE]

1: Gene. 1989 Apr 15;77(1):87-93. Related Articles, Links

Expression of biologically active human chorionic gonadotropin and its subunits by recombinant vaccinia virus.

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Vaccinia virus (VV) expression vector was used to clone the genes for coding alpha and beta subunits of human chorionic gonadotropin (hCG). Recombinant viruses VSL3 and VSS1 containing these genes were selected as blue coloured plaques on the basis of co-expression of Escherichia coli beta-galactosidase in the infected cells. CV-1 cells when infected with VSL3 or VSS1 secreted 2.4 and 1.8 micrograms of alpha and beta hCG subunits, respectively, per 3 x 10(6) cells after 24 h of infection. The subunit proteins expressed individually had immunoreactivity with monoclonal and polyclonal antibodies specific to hCG. The subunit hormonal peptides associated with each other during co-infection to form the complete hCG dimer, which was biologically active as evident from the induction of steroidogenesis in a mouse Leydig cell system.

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